REMARKS/ARGUMENTS

Claims 1-31 are pending. Claims 1, 4, 8, 10, 11, 13, 20, 24 and 31 are amended.

Claims 4 and 24 are objected to because of informalities. In view of the amendment to claims 4 and 24, it is respectfully requested that the above objections be withdrawn.

Claims 1-31 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Lin (U.S. 6,167,347). Applicants submit that all of the claims currently pending in this application are patentably distinguishable over the cited references, and reconsideration and allowance of this application are respectfully requested.

Amended independent claim 1 recites:

> A method for analyzing performance of a wireless location system comprising the steps of:
>
> storing data related to location equipment, wireless infrastructure, handsets, terrain map, and morphology map;
>
> generating a site radial file for predicting path loss and predicting time/angle error based on the stored terrain and morphology maps;
>
> computing a multi-site forward and a multi-site reverse link signal strength map for determining coverage of the location system;
>
> generating a multi-site margin map and a multi-site delay/angle error map from the computed multi-site forward and reverse link signal strength map and the stored data; and

generating a location error estimate map for the wireless location system from covariance at each point in the margin map and the multi-site delay/angle error.

Lin does not anticipate claim 1. First, Lin does not disclose "storing data related to . . . handsets, terrain map, and morphology map." Rather, the system of Lin receives "GPS measurements, including pseudorange [actual range measurement], carrier phase, and Doppler shift, from the GPS processor 20," and "inertial measurements, including body angular rates and specific forces, from the IMU 10." (Col. 5, lines 38-42). The above-mentioned data in Lin is not related to terrain map, morphology map, and handset. In fact, Lin makes it clear that "the pseudorange measurements are derived from the GPS code tracking loop," and the "Doppler shift and carrier phase measurements are obtained from the GPS satellite signal carrier phase tracking loop." (Col. 6, lines 52-58.).

Second, Lin does not describe "generating a site radial file for predicting path loss and predicting time/angle error based on the stored terrain and morphology maps," because a) Lin's system does not store terrain and morphology maps, b) Lin's system does not generate a site radial, c) Lin's system does not predict path loss, and d) Lin's system does not predict time/angle error based on the stored terrain and morphology maps.

Third, Lin does not explain "computing a multi-site forward and a multi-site reverse link signal strength map for determining coverage of the location system," because the system

of Lin does not have a reverse link. Rather, Lin's system only has a forward link, as shown in FIG. 2, by the "GPS antenna 21 to receive GPS signals which are amplified by a preamplifier circuit 22." (Col. 6, lines 32-33.). Moreover, Lin does not compute a multi-site signal strength map for determining coverage of the location system.

Fourth, Lin does not show " generating a multi-site margin map and a multi-site delay/angle error map from the computed multi-site forward and reverse link signal strength map and the stored data." The errors that Lin's system is concerned with are basically real-time GPS signal related errors such as, signal propagation errors, satellites errors. (See, for example, Abstract and Background of the Invention.). The so called position error of Lin, is due to drifting of an inertial navigation system over an extended period of time. "It means that the position error increases with time. This error propagation characteristic is primarily caused by its inertial sensor error sources, such as gyro drift, accelerometer bias, and scale factor errors." (Col. 2, lines 36-41.). In other words, Lin's system compensates for GPS signal related and satellites errors. Accordingly, claim 1 is not anticipated by Lin.

Amended independent claim 20 recites:

A system for performance analysis of a location system comprising:

means for generating a radial model and a radial map including a plurality of radial paths for a site from a stored raster map;

means for selecting a propagation model from a stored plurality of propagation models for predicting a path loss along each radial path;

at each point along a radial path, means for predicting accumulated angular errors and time delay errors; and

means for generating an error estimate from the path loss and the accumulated angular errors and time delay errors due to terrain and morphology.

Lin does not anticipate claim 20. First, Lin does not disclose "means for generating a radial model and a radial map including a plurality of radial paths for a site from a stored raster map." There is no discussion of generating a radial model in Lin. Further, Lin does not store any raster map.

Second, Lin does not describe "means for selecting a propagation model from a stored plurality of propagation models for predicting a path loss along each radial path." Lin's system does not store a plurality of propagation models for path loss prediction. Additionally, Lin's system does not predict a path loss along each radial path.

Third, Lin does not explain "at each point along a radial path, means for predicting accumulated angular errors and time delay errors," because Lin does not predict accumulated angular errors and time delay errors. Rather, Lin's system measures position error, velocity error, and attitude error coming from a Kalman filter to derive a corrected navigation solution. (Id, see also, claim 1.).

Fourth, Lin does not disclose "means for generating an error estimate from the path loss and the accumulated angular errors and time delay errors due to terrain and morphology." Again, as discussed above, Lin's (real time) velocity and acceleration errors "from an inertial navigation processor [are] corrected by a Kalman filter [and] are used to aid the code and carrier phase tracking of the global positioning system satellite signals to prevent loss of satellite signal and carrier phase clips encountered in a global positioning system receiver." (col. 3, lines 57-65.). These errors on Lin are not "due to terrain and morphology."

Consequently, claim 20 is also not anticipated by Lin. Independent claim 31 includes similar limitations as claim 20, therefore, claim 31 is not anticipated by Lin either.

In short, independent claims 1, 20 and 31 define a novel and unobvious invention over the cited references. Dependent claims 2-19 and 21-30 are dependent from claims 1 and 20, respectively and therefore include all the limitations of their respective independent claims and additional limitations therein. Accordingly, these claims are also allowable over the cited references, as being dependent from allowable independent claims and for the additional limitations they include therein.

In view of the foregoing amendments and remarks, it is respectfully submitted that this application is now in condition for allowance, and accordingly, reconsideration and allowance are respectfully requested.

Respectfully submitted,
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